



# **METHOD AND SYSTEM FOR INFORMATION DEVELOPMENT AND ACCESS**

## CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority to British Patent Application No. 0018839.1 filed 2 August 2000.

Also, Applicant has a co-pending Patent Application No. GB 9903830.9 entitled "Process Driven Information System" which subsequently has become a published European Application under No. EP1030258.

## STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable

## THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

Not Applicable

## INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

Not Applicable

## BACKGROUND OF THE INVENTION

The present invention relates to a method for constructing a process-driven "knowledge activation" system, and more particularly to a method for the development and use of business process models for distribution through electronic media such as web browsers, and the provision of access to relevant managed knowledge resources at appropriate points within the [[said]] models.

Process models are increasingly used to define best practice within a business and to communicate this to those associated with the business, with the potential benefit of enhanced business performance and the reduction in risk of failures of adherence to best ~~practise~~ practice, whether that best ~~practise~~ practice is defined within the ~~organisation~~ organization or by a regulatory body.

Alongside process models describing best practice processes and the resources that these require in order to be delivered, business will evolve a body of documentation, guidelines, policies and rules concerning the delivery of the ~~[[said]]~~ processes. This body constitutes the ~~organisation's~~ organization's knowledge resources that distinguishes its delivery of a process as described within a process model to their counterparts within this body or ~~organisational~~ organizational knowledge.

Prior art is cited in the area of business process ~~modeling~~ modelling. This work gives the ability to describe process, and describe the knowledge resource requirements of a business, but gives no manage linkage, i.e. the processes that make the ~~organisation~~ organization work, to the knowledge resources created around an ~~organisation~~ organization. Prior art can also be cited in the area of document management that provides mechanism for the storage, cataloguing and retrieval of electronic resources, but carried out with no process context.

Two key improvements in this area offered by ~~[[said]]~~ the activation are the tailoring of a business process model more closely to the way in which the business delivers its processes, and the access to said resources at the points in a process where they are required by people following ~~[[said]]~~ the process.

## SUMMARY OF THE INVENTION

According to the present invention there is provided a method for creating a process-driven knowledge activation system, the method comprising the following steps:

- creating a process model of a system comprising one or more elements being part of a general purpose graphical business model, the model accessible via a web browser;
- associating at points within processes in the model of a collection of symbols representing the resources that will be required by its user to be effective, the usage of the symbols across the model being auditable and traceable through a mechanism of dependency analysis within the ~~modelling~~ modeling tool;
- mapping the symbols to electronic knowledge resources stored in a file store;
- generating a process-driven knowledge activation system comprising the one or more symbols or named links associated with the processes linked to the knowledge resources;

the system revealing to the user, on clicking on a process, the associated knowledge resource symbols, the appropriate resource then being presented to the user on the click of the symbols or links.

In one embodiment the process model is part of a set of general purpose graphical business models and the process model can be accessible via a web browser.

In one embodiment the one or more elements of the process model are provided in a tool which uniquely identifies each element and maps each element to the one or more knowledge resources.

Typically the one or more knowledge resources can be in the form of arbitrary alternative web pages and/or we-accessible resources and can be accessed by the user selection of one or more of the process model symbols or links.

Preferably the process model is illustrated on a display screen and the elements can be selected by any conventional PC based user control system.

In one embodiment the knowledge resource symbols can be queried within a tool to ascertain for each the set of processes with a requirement on ~~[[said]]~~ the symbol's corresponding resource, so facilitating a process of resource change management.

In one embodiment the knowledge resources are accessed by the user selection of one or more of the symbols representing these resources from within a process model or definition. Typically the process model or definition is illustrated on a display screen and the elements can be selected by any conventional user control system such as mouse, keyboard etc. (and in the future - voice) and when an element is selected an appropriate display is generated for any associated knowledge resource.

In use, a ~~modeller~~ modeler/user follows the method described above to create a set of general purpose graphical business models containing various linked elements in a tool, ~~[[said]]~~ the tool able to generate models which are accessible via a web browser and which links the knowledge resource symbols in the browser by uniquely identifying each element and corresponding knowledge resource. The preferred embodiment of the invention, maps knowledge resource symbols (associated with a process that requires them) to their corresponding knowledge resources using a mechanism based on that described in the applicant's co-pending ~~[[p]]~~Patent ~~[[a]]~~Application No. GB9903830.9 for

## "Process-Driven Information Systems".

The advantage of the present invention is that it provides a method for creating a process driven knowledge activation system that can communicate and disseminate arbitrary business system that can communicate and disseminate arbitrary business intent, additionally providing access to a managed body of ~~organisational~~ organizational knowledge resources at appropriate points in the process models describing ~~[[said]] the~~ processes by that ~~organisation~~ organization.

According to a further aspect of the invention there is provided a business model, ~~[[said]] the~~ model comprising a number of process model elements which in conjunction represent the business model and ~~characterised~~ characterized in that at least one of the elements is linked to a number of resources which can be selectively accessed by a user of the model and ~~[[said]] the~~ resources linked to a particular element are made available to the user following the user choosing the particular element.

In one embodiment the business model is displayed on a display screen and the user can interact with ~~[[said]] the~~ model using a suitable control tool such as a computer mouse to select one or a number of the elements which make up the model. Upon selection, if there are any resources linked thereto in the model, the same are represented on the display screen and thereafter selectable by the user.

Upon selection of a resource the business model accesses the same and makes the same available for use by the user.

Thus, in one embodiment, improved business model usage is provided to the user by the user clicking at an element or process in the ~~organisational~~ organizational model, ~~[[said]] the~~ click

revealing the knowledge resources available or required at that element in the model. Each resource can be presented to the user through a click on a symbol or named link that represents a specific required resource, followed by the delivery of ~~[[said]]~~ the resource to ~~[[said]]~~ the user.

Moreover, the model includes a mechanism whereby the distributed and evolutionary aspects of the ~~organisation's~~ organization's knowledge resources can be hidden from the users of ~~[[said]]~~ the resources through the mechanism of accessing resources from their representation within ~~[[said]]~~ the process models or their definitions, rather than directly through a file store.

Furthermore, ~~[[said]]~~ the activation provides the traceability of the usage of knowledge resources throughout the ~~organisation~~ organization as an aid to knowledge resource management and auditability.

Typically, there is provided a model as herein described which is graphically represented on a display screen and including a series of model elements and a series of resources, ~~[[said]]~~ the resources, or representations thereof linked to elements and revealed to the user upon the user selecting an element, the associated resources then presented to the user for selection, and, upon selection, accessible to the user.

## BRIEF DESCRIPTION OF THE DRAWINGS

Specific embodiments of the invention will now be described with reference to the accompanying Figures wherein:

Figure 1 represents an embodiment of the architecture of the apparatus of the present invention. A Repository is accessed through a data source name by the ~~modelling~~ modeling tool Business Developer, with which process models and ~~modelling~~ modeling elements representing knowledge resources are created and associated. The publishing tool Web Publisher creates a set of web pages for these models. The activation tool Knowledge Activation links resources from the Knowledge Centre Center (an electronic library of knowledge resources mapped to by the symbolic knowledge resources elements held within the Repository) to the web pages for process models that have been defined in Business developer to require these resources. A web browser is used to browse process models and gain access to the sets of resources associated with each process;

Figure 2 shows a screen display of a definition window for the process 'Engage with Customer' developed using a process ~~modelling~~ modeling tool, "MooD Business Developer", to which a symbols representing knowledge resources have been added;

Figure 3 shows a screen display of the 'Engage with Customer'[[;]] process ~~utilising~~ utilizing a process model in accordance with the invention, complete with a generated link to the knowledge resources defined in the process ~~modelling~~ modeling tool, along with a figurative illustration of the effect of a click on [[said]] the links;

Figure 4 shows a screen display of the "Receive and Record Request" process complete with symbols representing knowledge resources, along with a figurative illustration of the effect of a click on the links;

Figure 5 shows a screen display of the collection of knowledge resources as defined in the Business Developer tool, with a following through of the dependencies for one of the resources[.] ;

Figure 6 is a flow chart setting forth the steps of creating a process-driven knowledge activation system according to the present invention.



## DETAILED DESCRIPTION OF THE INVENTION

In the following description, an example of the method according to the invention is referred to as "Knowledge Activation". The underlying concept of Knowledge Activation is to link process models with a Knowledge ~~Centre~~ Center into which users can store and ~~organise~~ organize knowledge resources for subsequent search and retrieval through the business process models, presenting a consistent operating interface to these resources for people associated with the business workers. A preferred embodiment of Knowledge Activation is as follows:

1. A ~~modelling~~ modeling team creates a set of process models representing the business using a ~~modelling~~ modeling tool which generated outputs accessible via a web browser, also associating with these process models symbols representing the knowledge resources (e.g. documentation, guidelines, policies and rules) that ~~characterise~~ characterize the delivery of these processes in this business, using the dependency analysis of the ~~modelling~~ modeling tool to audit and trace resource ~~utilisation~~ utilization.
2. Those people responsible for the knowledge resources identified in step 1 ~~organise~~ organize and store these resources in a Knowledge ~~Centre~~ Center (or other accessible electronic storage), which can additionally be a distributed Knowledge ~~Centre~~ Center across many physical locations;
3. The apparatus of this invention, which incorporates the apparatus of the invention "Process Driven Information Systems' is used to create a mapping between knowledge resource

symbols and the knowledge resources, ~~[[said]]~~ the mapping being stored and used to modify the collection of web pages appropriately;

4. The resulting Process Driven Knowledge Activation System is published to the user community;
5. The above 4 steps are periodically repeated in a review cycle in which the process models and resources of the Process Driven Knowledge Activation System are revised and re-published.

Thus, the present invention provides a method for creating a process-based information system giving access to relevant knowledge resources at the appropriate points within a process where those knowledge resources are required. As seen in Figure 6, the method comprises the steps of creating a process model or models comprising one or more elements which are accessible via a web browser, associating these processes with one or more symbols representing the knowledge resources that ~~characterise~~ characterize their deliver, storing and ~~organising~~ organizing one or more knowledge resource which are accessible via a web browser, and generating a process-driven knowledge activation system comprising one or more knowledge resource symbols or links associated with a process model or definition which act as the user interface to the one or more knowledge resources. This method allows the rapid creation by non-technical users of process models describing the working of the ~~organisation~~ organization, the models being used as a means of accessing in context the body of ~~organisational~~ organizational knowledge that distinguishes its delivery of a process from another ~~organisation's~~ organization's delivery of the same process, with associated benefits

in the management and traceability of a distributed, evolving body of ~~organisational~~ organizational knowledge.

While the invention has been described with a certain degree of particularity, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit of the scope of this disclosure. It is understood that the invention is not limited to the embodiment set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims including the full range of equivalency to which each element thereof is entitled.

## METHOD AND SYSTEM FOR INFORMATION DEVELOPMENT AND ACCESS

### ABSTRACT OF THE INVENTION

~~The present invention relates to a~~ A method and apparatus for constructing and ~~utilising~~ utilizing a process-driven "knowledge activation" system, and more particularly to a method for the development and use of business process models for distribution through electronic media such as web browsers, and the provision of access to relevant managed knowledge resources at appropriate points within ~~[[said]]~~ the models. The system includes the provision of a number of interlinked elements at least one of which is selectable from a graphical representation of the model and at least one of the elements is provided with links to a number of resources required for completion of the element, ~~[[said]]~~ the resources indicated graphically to the user upon the selection of the appropriate element.